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Mine detection dogs (MDDs) have become an important tool to mine action organizations in many programs across the globe. For about 15 years, RONCO has been one such organization. This article describes the role of MDDs in RONCO's operations.

by RONCO

Introduction

Brenda sits, alerting her handler that she has located the training mine. Her handler retrieves a red rubber ball from his pocket, throws it, and praises Brenda after she has chased it down and obediently returned to her position. Brenda is easily satisfied with the positive reward she receives; her handler, Jaromir Josipovic, is pleased with her performance over the past week of refresher training. He trusts her keen ability to detect mines; she trusts him to lead her to the lane and care for her after a long day in the field. Together, RONCO's bonded MDD team of Brenda—a Belgian Tervuren (a cross between a Belgian and German Shepherd)—and Jaro—a Bosnian dog handler—work all over the world, preventing injuries and fatalities from landmines and UXO.

In the past, the team has deployed to the Balkans, Cuba, Namibia and Albania to tackle mine clearance tasks. However, their most challenging is their most recent demining task in mine-laden Afghanistan, where the RONCO MDD teams searched more than two million square meters of land for mines and UXO in the past year. During their deployment, Brenda and Jaro—along with RONCO's other 15 MDD teams—were overwhelmingly successful in a country often considered to be one of the most dangerous and severely mine-infested in the world. For example, while verifying the clearance of an area near Kandahar Air Base allegedly free of mines, Brenda detected the presence of an explosive device that had previously been overlooked. Brenda's highly sensitive and well-trained nose alerted Jaro to the mine, thus precluding any chance of tragedy and safeguarding U.S. soldiers stationed at the air base.

An Integrative Approach

Brenda and Jaro's success over the past six years, working at challenging tasks such as their present one in Afghanistan, results from both the precision of MDD training techniques and the integration of MDD teams into demining operations. Beginning in the late 1980s, RONCO and its partner, Global Training Academy (Global), developed an innovative and highly effective method of detection, clearance and verification of minefields that is still used today. By integrating MDDs into clearance operations, RONCO quickly developed the capacity to vastly increase productivity in the field, and more importantly, to prevent the risk of casualties to deminers. The integration of MDDs into mine clearance and quality assurance (QA) tasks has evolved into an industry-standard method of demining, making RONCO a leader in the innovation and design of MDD programs.

RONCO began incorporating dogs into demining operations in Afghanistan in 1989, following the departure of Soviet forces. In a country highly burdened with landmines, a trained dog's sharp ability to pinpoint and alert handlers to the locations of mines, as well as the speed with which it can cover large areas of ground, became a valuable asset to manual demining teams. Utilizing the dogs' fine-tuned skill to detect mines and integrating the dogs into manual demining operations proved to be a highly accurate, safe and cost effective development in humanitarian demining. Today, some 15 years later, trained and experienced dogs like Brenda are still the most precise method of mine detection.

Jaro and Brenda are honored as Mine Detection Dog Team of the Year at the Champions for Children Award and Benefit Gala.

A Tested and Proven Technology

In 1995, the U.S. Army conducted a field test to assess the value and accuracy of 30 discrete demining technologies, including RONCO/Global's MDDs. The assessment concluded that dogs were "at the top of the list, in terms of finding mines and tripwires.... They detected every tripwire set and discovered more mines than any other system." Further, the Army study noted that the cost-effectiveness and timeliness of utilizing MDDs in mine clearance operations were enhanced when coupled with appropriate vegetation clearance machinery, and/or manual deminers with detectors and personal protective equipment (PPE). Based on its testing, as well as its current experience working with RONCO MDD teams in Afghanistan, the U.S. Army has recently decided to establish its own organic MDD program. Bonding training of the first class of six MDDs and their Army handlers was scheduled to begin in mid-March 2003.

RONCO's MDD Programs

MDDs alone, however, are an insufficient approach to humanitarian demining. Rather, it is their integration with manual and, when possible, mechanical mine clearance operations that is both the most effective employment of MDDs and a fundamental feature of RONCO's programs. With more than 14 years of training and field experience, RONCO has used MDDs in Bosnia, Croatia, Kosovo, Albania, Mozambique, Namibia, Rwanda, Eritrea, Azerbaijan, Lebanon and Afghanistan. As a result, MDDs have developed into an integral component of RONCO's mine clearance "tool kit." Currently, RONCO is employing MDDs for clearance tasks in seven countries. The impact of MDDs on demining can be seen in the following examples.

Demining of the Sena Railway Line in Mozambique

In 2000, RONCO began providing on-site technical support and assistance to the Mozambican National Institute of Demining (IND) under the U.S. Department of State (DOS) Office of Humanitarian Demining Program's Integrated Mine Action Support (IMAS) contract. In total, RONCO has employed 12 MDDs in support of the IND. In efforts to locate and clear mine-affected areas in Mozambique, the IND quickly charged RONCO with its highest-priority task: the clearance of areas on and around the Sena Railway Line. Despite severe flooding and extreme working conditions, RONCO continued mine clearance operations on this major task throughout 2001 and 2002.

In comparison with 2001, in 2002 RONCO experienced ideal weather conditions for demining on the Sena Railway Line. With successful coordination of the demining teams, optimal productivity from the MDD teams in the field and minimal mechanical downtime for the two machines being employed in this task, considerable progress was made towards completing the railway clearance. The integration of manual, MDD and mechanical methods of clearance proved to be extremely effective during these operations.

RONCO teams in Mozambique cleared over 450 kilometers of railway line in support of the Sena Railway Line Rehabilitation Project, as well as over seven million square meters of ground in other areas of Mozambique. Clearance of the entire line was completed in September 2002, some six months aheadof schedule. Clearance and QA operations on the rail line, in addition to clearing construction access routes to the railway, enabled contractors working to restore the railway line to rebuild five railway bridges and multiple water drainage channels. As a result, the rehabilitation contractor estimates that the first section of the railway line, measuring approximately 100 kilometers and extending from Beira to Muanza, will be completed sometime in the spring of 2003, some 20 years after the railway was closed. Demining and reconstruction of the Sena Railway Line, which runs through Mozambique's economic heartland, will have a significant impact on economic development and job creation; it has already produced jobs for the many Mozambicans employed by the rehabilitation project.

Integrating MDDs Into Demining Operations in Afghanistan

In 1989, RONCO created the Afghanistan Mine Dog Detection Center, an Afghan non-governmental organization (NGO) with 92 MDDs and about 270 Afghan employees. Although RONCO completed its fieldwork on this project in early 1994, the Center continues to operate effectively today; it currently comprises 144 dog teams, includes an MDD breeding program and supports the entire UN demining effort in Afghanistan. In 1993, RONCO-trained teams found 22,000 mines and UXO in Afghanistan, more than one-fourth of the 80,000 pieces of ordnance destroyed under UN auspices worldwide that year.

Over 450 kilometers of railway line have been cleared in Mozambique through integrated mine clearance operations utilizing manual, MDD and mechanical components.

More recently, RONCO deployed 11 staff members and eight MDD teams to Afghanistan in support of the U.S. Army's effort to clear landmines and UXO at Bagram and Kandahar Air Bases, key footholds for *Operation Enduring Freedom* in the aftermath of the September 11th terrorist attacks on the United States. By the end of the 2002 Afghanistan deployment, the total number of personnel peaked at 35 staff members providing on-the-ground technical oversight and 16 MDD/handler teams conducting clearance and QA tasks. The MDD teams deployed by RONCO consisted of highly experienced dogs (including Brenda) and their Bosnian handlers (including Jaro); most had been working together between four and five years and had previously worked in widely varying areas, including Bosnia, Azerbaijan, Kosovo, Namibia and Guantanamo Bay, Cuba. Due to their success, the U.S. Army has brought the RONCO teams back to Afghanistan for 2003 following a two-month break over the worst part of the Afghan winter.

As noted earlier, over two million square meters of land were cleared from Bagram and Kandahar Air Bases, from the Afghan National Academy in Kabul and from other, smaller areas around the country in 2002. Over 10,000 mines and UXO were located and destroyed during these operations, most of them being detected behind flail operations. A

significant number of AT mines, however, were detected *ahead* of the flails, since flail operators, when processing land suspected of containing AT mines, requested that the MDD teams precede them to minimize possible damage to their equipment.

Partnering With MLI in Eritrea

In 2001, RONCO began providing assistance to the Eritrean Demining Program (EDP) by establishing an MDD capability to support national demining objectives. In addition, RONCO participates in the Marshall Legacy Institute's (MLI's) Mine Detecting Dog Partnership Program (MDDPP) in Eritrea. This program combines the resources of the U.S. and Eritrean governments, MLI, RONCO/Global and private-sector contributors to develop an indigenous MDD capacity in Eritrea. The partnership has resulted in the deployment of certified dogs bonded with local handlers into an integrated mine clearance process to accelerate the pace of mine clearance operations.

To date, RONCO technical advisors assisting the EDP have trained two demining companies of three platoons each and an MDD section currently consisting of 12 MDD teams. Both companies and the MDD section operate independently in the field with periodic resupply, maintenance and supervisory visits from Eritrean army headquarters. The MDD section supports the demining platoons in their survey, clearance and QA operations.

In June 2002, the EDP assigned the RONCO-trained companies and MDD section to clear a site vital to the local agricultural economy and to the resettlement of internally displaced persons (IDPs) in the area of Tserona, along the Eritrea-Ethiopia border. Successful and accurate clearance was vital in the assigned 900,000-square-meter site, since the Eritrean government had not allowed its tractors to plow the land for fear of landmines, local villagers had not been allowed to plant crops or graze animals on the suspect land either. As of December 2002, approximately 800,000 square meters had been cleared, representing almost 90 percent of the total assigned area. Despite high temperatures and difficult terrain, the individual MDD teams have been clearing a daily average of 1,300 square meters. In this work, following the initial clearance of assigned areas by both deminers and MDDs, two additional MDD teams conduct a QA check before the area is deemed mine safe. As a result of this successful operation, a large agricultural and grazing area vital to Eritrea's economy has quickly and safely been brought back into production.

MDDs are an integral tool in mine clearance operations because of their ability to pinpoint the locations of ordnance.

Combining All Three Demining Components in Thailand

With technical support and oversight from RONCO and with support from both the U.S. DOS and Department of Defense (DoD), the Thailand Mine Action Center (TMAC) has effectively combined all three methods of mine clearance: manual, MDD and mechanical. This unique capacity and experience in integrating all three demining components is the first of its kind in the Asia region.

In total, RONCO has provided 32 MDDs to TMAC under the DOS's IMAS contract. During RONCO's 22-month period of assistance to TMAC,

humanitarian mine action unit (HMAU) #1 underwent intensive training and integration work with its own MDD teams and three mechanical systems—the Tempest, the Survivable Demining Tractor and Tools (SDTT) and the BDM 48—conducting demining operations in both the wet and dry seasons. The development of a fully integrated humanitarian demining capacity is a significant and noteworthy accomplishment for TMAC, considering the extent and severity of Thailand's landmine and UXO problem, particularly along its border with Cambodia.

TMAC is faced with the daunting task of both creating an effective humanitarian demining program (to date, two HMAUs are in full operation, a third has begun manual demining and a fourth was recently established) and conducting field integration and training, mechanical equipment training and trials, and live clearance operations in high-priority areas. TMAC is also charged with quickly and effectively transforming mine- and UXO-contaminated farmland to productive fields in order to resettle IDPs and ease population pressure along the border with Cambodia. This land, furthermore, is mostly highly ferrous laterite soils that is both heavily contaminated with metal (particularly in areas previously used as refugee areas by the Khmer Rouge and other Cambodian resistance groups) and has heavy jungle vegetation in former guerilla base areas and battlefields. As a result, the integration of MDD teams with both manual and mechanical demining has been vital to the success of TMAC's operations to date and to the early reversion of previously denied lands to villagers in the border area. Since 2000, TMAC has cleared almost six million square meters of mine-affected land through the use of this integrated manual, MDD and mechanical demining system.

In all of the above examples, the success of RONCO and the host country is due to the integration of MDD programs into manual mine clearance operations. These programs are even more effective when combined with both manual and mechanical operations, bringing the full range of clearance technologies to the task of clearing landmines and UXO from economically important, but denied, lands.

Conclusion

Brenda sits again, alerting Jaro that she has found another training mine. Just days after a week-long trip to the United States where they were honored as Mine Detection Dog Team of the Year at the Champions for Children Awards and Benefit Gala, Brenda and Jaro are both re-acclimated to the terrain and environment of Afghanistan. The May 2002 event was co-hosted by MLI and the U.S. Fund for the United Nations Children's Fund (UNICEF), and honored other mine action pioneers, including Queen Noor of Jordan, Senators Chuck Hagel and Patrick Leahy, and America Online (AOL) Chairman James Kimsey. Of the award recipients, Brenda and Jaro are, by far, the closest to the action. Both have spent the majority of their time over the last six years in live minefields, dedicated to the removal of landmines in mine-affected countries.■

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